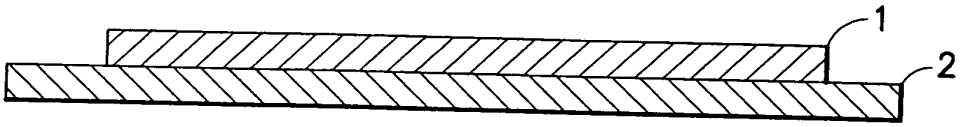



FIG.1

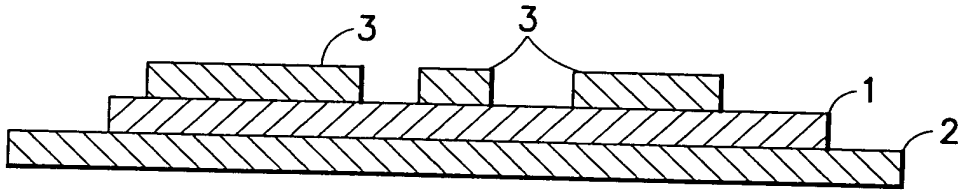



FIG.2

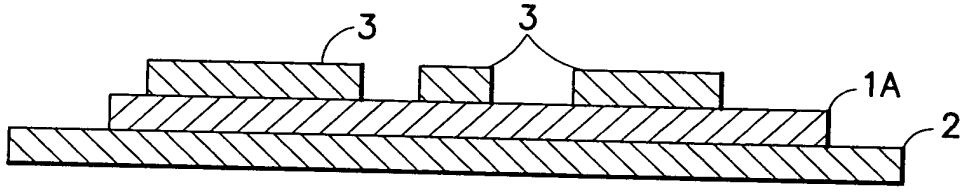



FIG.3a

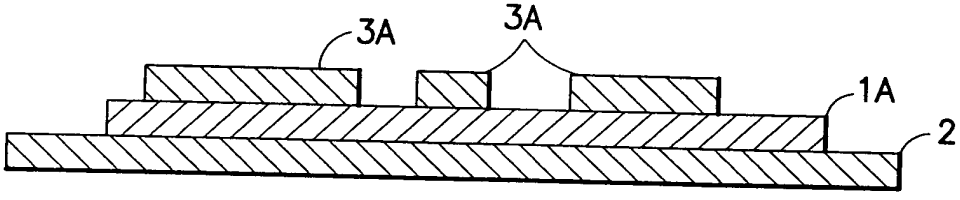



FIG.3b

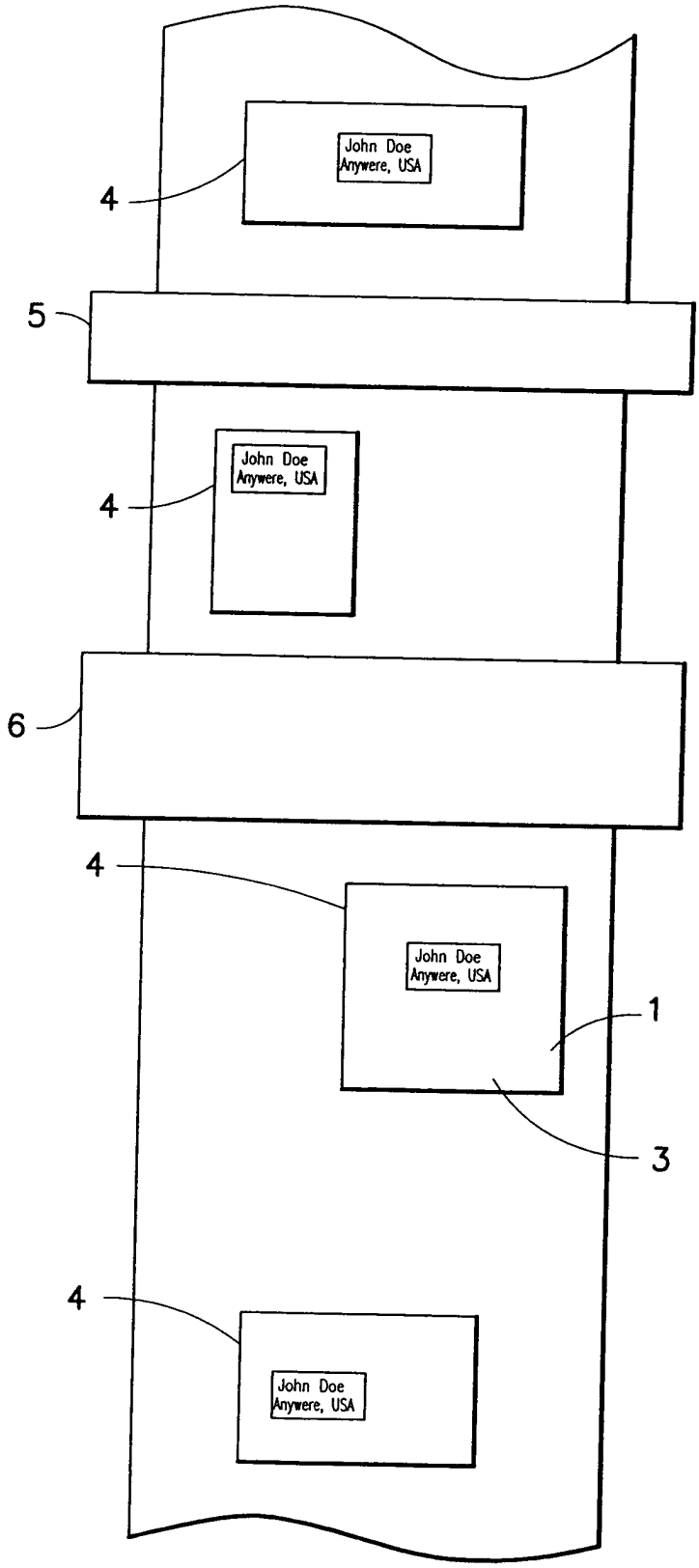

John Doe
Anywere, USA
4
5
John Doe
Anywere, USA
4
6
4
John Doe
Anywere, USA
1
3
4
John Doe
Anywere, USA

FIG.4

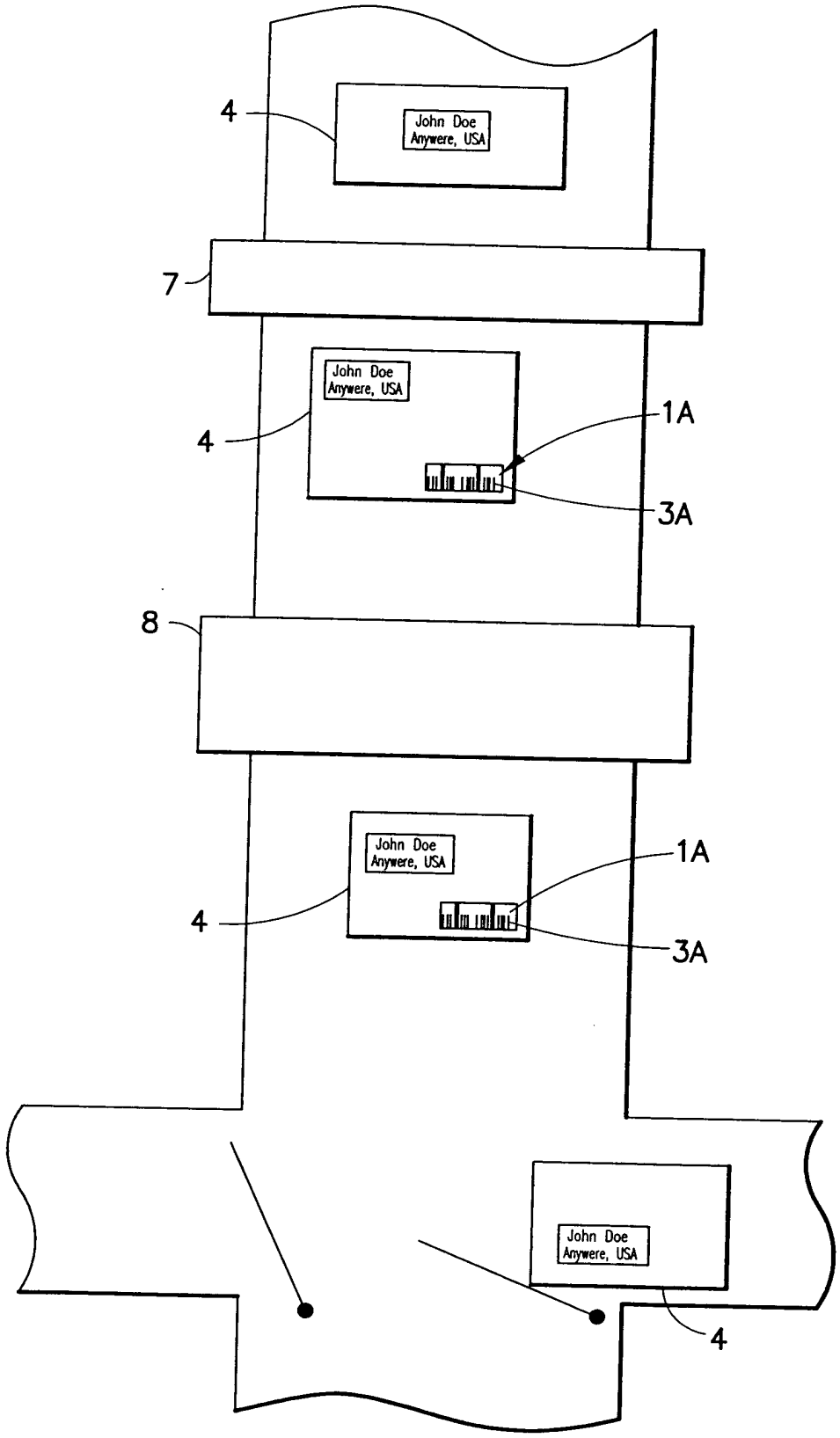

4
John Doe
Anywere, USA
7
John Doe
Anywere, USA
4
1A
3A
8
John Doe
Anywere, USA
4
1A
3A
John Doe
Anywere, USA
4

FIG.5

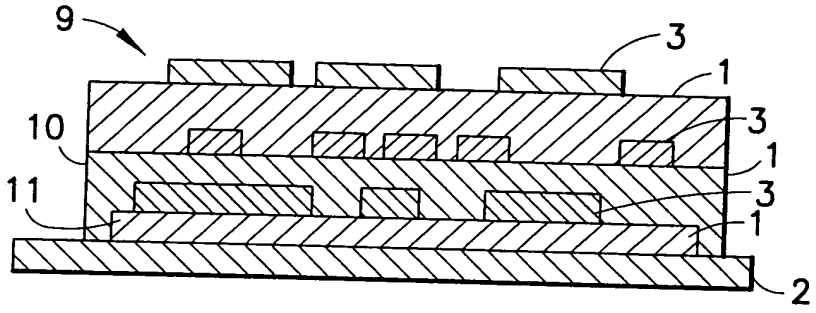

9
3
1
10
3
1
11
3
1
2

FIG.6

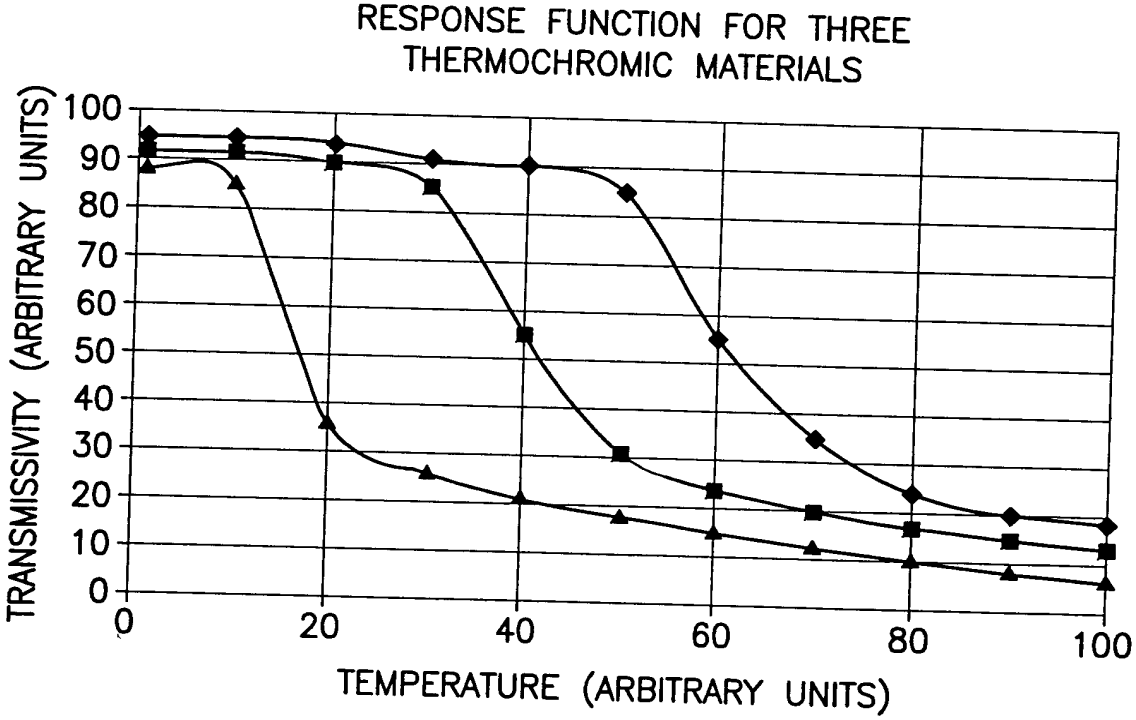

RESPONSE FUNCTION FOR THREE
THERMOCHROMIC MATERIALS
TRANSMISSIVITY (ARBITRARY UNITS)
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
TEMPERATURE (ARBITRARY UNITS)

FIG.7

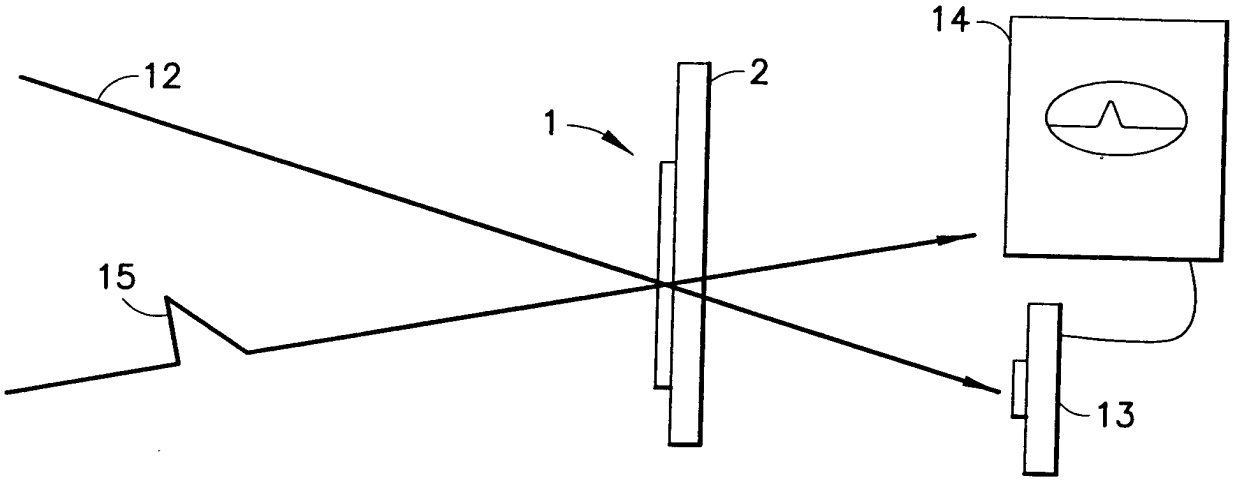

14
12
2
1
15
13

FIG.8

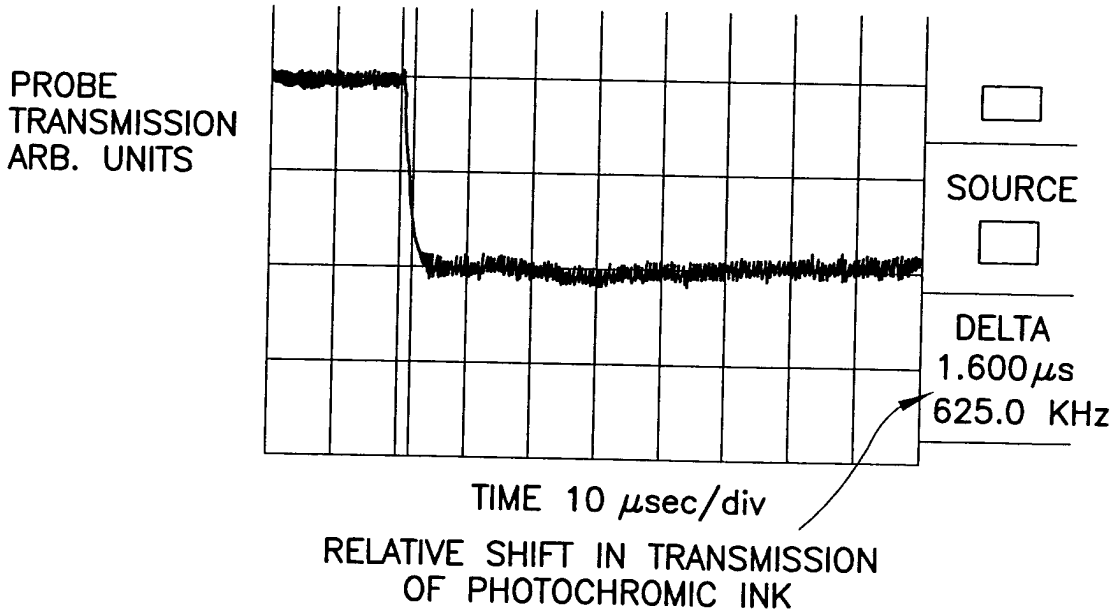
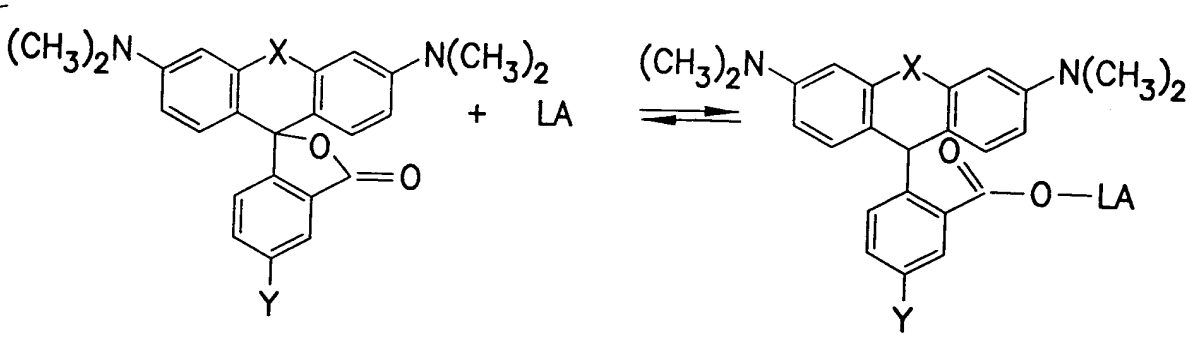
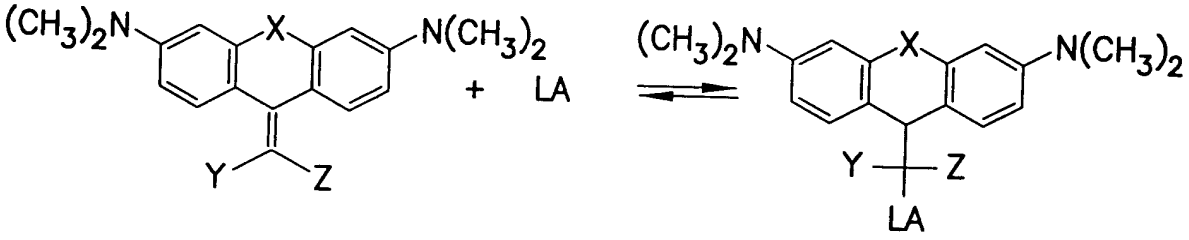

PROBE
TRANSMISSION
ARB. UNITS
SOURCE
DELTA
1.600μs
625.0 KHz
TIME 10 μsec/div
RELATIVE SHIFT IN TRANSMISSION
OF PHOTOCHROMIC INK

FIG.9

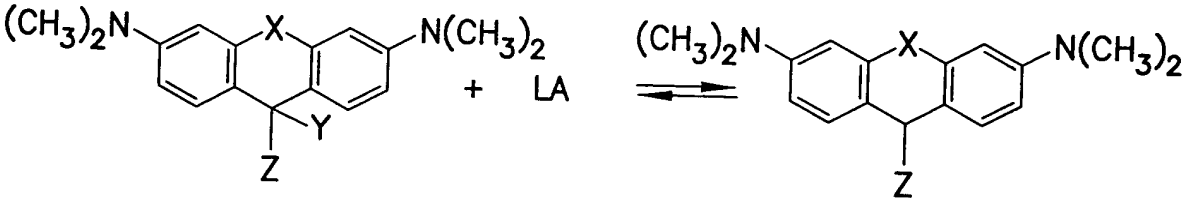



LACTONE (COLORLESS) STRUCTURE 1 SCHEME 1 CATIONIC DYE (COLORED)




DIARYLETHYLENE (COLORLESS) CATIONIC DYE (COLORED)

STRUCTURE 2 SCHEME 2




Z=alkyl,aryl.ect
Y=OH,Oalkyl,Oaryl
AND OTHER HETEROATOM CONTAINING MOIETIES

DI(TRI)ARYLMETHANE (COLORLESS) CATIONIC DYE (COLORED)

STRUCTURE 3 SCHEME 3

FIG.10